



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D <i>* : Required Field</i>

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-09-12
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Authorized Representative *	Floriana SAN BIAGIO	Representative Title	AMS MD CHAMPION
Representative Phone *	Refer to Supplier Comment section	Representative Email *	Refer to Supplier Comment section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/support.html		

Uncertainty Statement

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Legal Statement

Supplier Acceptance *	true	Legal Declaration *	Standard
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Legal Statement

Supplier certifies that it gathered the provided information and such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part(s), and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part(s), the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Supplier's liability and the Company's remedies for issues that arise regarding information the Supplier provides in this form.

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
	KKQ7*U748ABZ	A	SH1A	2018-09-12
	Amount	UoM	Unit type	ST ECOPACK Grade
	150	mg	Each	ECOPACK® 2
Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant (in each organic material)			

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
3	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	3.9x9.9x1.25	16	gull wing	
Comment	Q7 SO 16 .15 TO JEDEC MS-012; MDF valid for L5991D			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	TRUE
2 - Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7b' exemption (other selected exemptions may apply)	FALSE
3 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	FALSE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description

QueryList : REACH-27th June 2018				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
;				
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	KKQ2* U748ABZ				4999997.0	1000001.0				
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)				
Die	M-011 Other inorganic materials	5.512	mg	supplier	die	Silicon (Si)	7440-21-3		5.319	mg	964985	35460				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.030	mg	5443	200				
				supplier	metallization	Copper (Cu)	7440-50-8		0.001	mg	181	7				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.017	mg	3084	113				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.072	mg	13062	480				
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.003	mg	544	20				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.027	mg	4898	180				
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.043	mg	7801	287				
				Leadframe	M-004 Copper and its alloys	35.900	mg	supplier	alloy	Copper (Cu)	7440-50-8		33.855	mg	943036	225700
								supplier	alloy	Iron (Fe)	7439-89-6		0.796	mg	22173	5307
supplier	alloy	Iron Phosphide (FeP)	26508-33-8						0.048	mg	1337	320				
supplier	alloy	Zinc (Zn)	7440-66-6						0.042	mg	1170	280				
supplier	metallization	Nickel (Ni)	7440-02-0						0.137	mg	3816	913				
supplier	metallization	Palladium (Pd)	7440-05-3						0.009	mg	251	60				
supplier	metallization	Gold (Au)	7440-57-5						0.004	mg	111	27				
supplier	metallization	Silver (Ag)	7440-22-4						1.009	mg	28106	6727				
Die attach	M-015 Other organic materials	1.459	mg					supplier	glue	Silver (Ag)	7440-22-4		1.280	mg	877313	8533
								supplier	glue	Isobornyl Methacrylate	7534-94-3		0.073	mg	50034	487
				supplier	glue	Acrylate resin	5888-33-5		0.073	mg	50034	487				
				supplier	glue	Methyl acrylate polymer	87320-05-6		0.029	mg	19877	193				
				supplier	glue	Epoxy(2-cyclohexylethyl)trimethoxysilane	3388-04-3		0.002	mg	1371	13				
				supplier	glue	Tert-Butyl peroxy(2-ethyl)-hexanoate	3006-82-4		0.002	mg	1371	13				
				supplier	wire	Copper (Cu)	7440-50-8		0.072	mg	1000000	480				
				Encapsulation	M-015 Other organic materials	107.057	mg	supplier	mold compound	Silica, vitreous	60676-86-0		93.889	mg	877000	625927
								supplier	mold compound	Epoxy resin	85954-11-6		4.282	mg	39997	28547
								supplier	mold compound	Epoxy	29690-82-2		4.282	mg	39997	28547
supplier	mold compound	phenol resin	Proprietary						3.212	mg	30003	21413				
supplier	mold compound	additive	Proprietary						1.071	mg	10004	7140				
supplier	mold compound	carbon black	1333-86-4						0.321	mg	2998	2140				